Motorola 52nd Street Superfund Site
Community Advisory Group (CAG) Meeting

Minutes
Wednesday, April 27, 2005
6:00 p.m. -8 p.m.
Arizona Department of Environmental Quality - Conference Room 250
1110 West Washington Street
Phoenix, Arizona

ADEQ Staff in Attendance:
Kris Paschall, ADEQ Project Manager
David Haag, ADEQ Hydrologist

EPA Staff in Attendance:
Viola Cooper, EPA Community Involvement Coordinator (CIC)
Janet Rosati, EPA Remedial Project Manager (RPM)
Nadia Hollan, EPA RPM
Cameron McDonald, EPA CIC

EPA Support in Attendance:
Sue Kraemer, Shaw Environmental

CAG Members in Attendance:
Doug Tucker
Patricia Zermeno
Martha Breitenbach
Mary Moore

Others in Attendance:
Troy Meyer
Katherine Roxlo
Viola had rest on sign-in sheet

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1. Welcome and Introductions - Viola Cooper, EPA Community Involvement Coordinator

Ms. Cooper opened the meeting and provided information on the evening's agenda and presenters. Cameron McDonald, an EPA CIC, was introduced. All in attendance introduced themselves including EPA and ADEQ staff members, CAG members, company representatives and audience members.

2. Technical Assistance Grant (TAG) Announcements - Mary Moore, Lindon Park Neighborhood Association

Ms. Moore, whose organization was awarded the (TAG), was introduced. Ms. Cooper explained that Ms. Moore would provide regular updates and was added as a presenter before formal agenda items were discussed. Ms. Moore will be reporting information for the group from her technical advisor. Ms. Cooper explained that once the TAG members hired a technical advisor that individual would be making presentations as well.

Ms. Moore reported that progress had been made regarding the selection of a technical advisor. Selection was expected soon and members hoped to have the individual under contract right after that. They had requested a public comment meeting from ADEQ on the Honeywell Corrective Action Plan. A letter was sent to Mark Lucas, UST ADEQ. ADEQ concurred with a date and meeting time TBD. In a separate letter to EPA, TAG members expressed a concern regarding a conflict of interest situation. Ms. Moore reported the item was resolved. Referring to a June 2nd community involvement meeting for the North Bend Wash Superfund Site, Ms. Cooper indicated that Ms. Hollan had requested an environmental resource list be produced. The list will site appropriate POC information of various state and local government entities.

3. **Operable Unit 3(OU3) Study Area Remedial Investigation/Feasibility Study (RI/FS) Draft Work Plan - Janet Rosati, EPA Remedial Project Manager**

Ms. Cooper introduced Ms. Rosati who provided a presentation on the RI/FS Work Plan and the tasks necessary to complete the plan. Approximately 24 slides were presented.

Ms. Rosati explained EPA was currently at the Remedial Investigation and Feasibility Study (RI/FS) phase in the Superfund process. She shared the work plan components that included RI, FS and Risk Assessment (RA); she discussed the next phases, the Proposed Plan (PP) and the Record of Decision (ROD).

Ms. Rosati discussed a brief history of EPA's involvement with Operable Unit 3. The current status: EPA has installed 28 groundwater monitoring wells at various depths and was proposing installation of 11 additional wells. The numbers may change depending on community feedback and approval to install the wells at specific locations. Locations may change with utility clearances and additional work may occur in the summer of 2005.

The study area was outlined and the proposed locations of new wells were highlighted. Ms. Rosati indicated the wells were in various zones depending on where additional data was required. She reported the highest concentration of the plume was along Van Buren. A number of wells will be installed in the core of the plume to provide more data at specific depths or where data may be lacking to provide information on the concentration of contaminants that are exiting the OU3 area and entering West Van Buren. Additional information was required for the south side of the plume where there was a 5 parts per billion (ppb) contour (drinking water standard of TCE) to better define the southern boundary of OU3.

Ms. Rosati discussed the plume's three zones. Depictions on the slides represented the shallow zone (yellow showed the highest contaminant concentration of over 100 ppb), the intermediate zone, and the deep zone. The plume was highlighted by a light green contour in the southeastern section of OU3.

Ms. Rosati referred to the locations of the groundwater monitoring wells listed in the evening's handouts. Phase III wells were proposed at those locations. Two additional wells were not listed in the handouts. One was located on 5th Street south of Monroe and one was located on 15th Street between Van Buren and Monroe. Both were located in the core of the plume so they were core locations shown on the map.

Ms. Rosati explained they were planning to collect soil gas samples this summer. Contaminants in the groundwater were volatile so they could migrate up from the groundwater, through the soil and potentially into houses. Since contaminants were volatile, they could be present in pore spaces of soil particles in the gas form. Readings from collected soil gas samples may determine whether contaminants were present. They could also help determine the concentration of those contaminants and whether they posed a risk to someone living above the area who may potentially inhale the contaminants in the home. She showed the participants where proposed collection of gas

samples will occur (indicated by orange dots on slide) at the core of the plume area along Van Buren. EPA will collect soil gas samples in areas of highest groundwater contamination. They will also choose locations near homes to determine if there is a receptor or someone who may come into contact with potentially contaminated indoor air. Samples will also be sought from beneath the pavement because contaminants can collect there as well, as in a slab foundation or basement. Information obtained from the soil gas sampling and the groundwater data will be included in the RA.

Ms. Rosati explained that a Baseline RA was a tool used by EPA to help evaluate what the potential risk of exposure to site chemicals might be if EPA were to take no action. For OU3 the focus was on the risk from groundwater.

Ms. Rosati provided an overview of the OU3 Hydrogeologic Conceptual Site Model and discussed the exposure pathways EPA was addressing. She discussed the cross-section OU3, ground surface, unsaturated soil and the water table. She highlighted the shallow, intermediate, deep zones and the bedrock. She discussed the monitoring wells within various zones. In OU3, EPA has identified two middle or intermediate zones. EPA distinguishes between the two by referring to them as M1 and M2. She highlighted the deepest zone and explained how groundwater flows in an east to west direction. While there was no present use of groundwater or no direct contact with groundwater, the RA will assume there is. Ms. Rosati highlighted a drinking water well in the plume that might result in a human health risk or a potential risk from contaminated groundwater if this is a potential drinking well. Ms. Rosati proposed: "If someone were to drink the water or shower using contaminated groundwater would they be ingesting contaminated groundwater or inhaling vapors and if so, what would the risks be?" She presented a figure which showed the volatile chemicals potentially migrating up from the groundwater, perhaps presenting a risk in the home. The figure also showed a potential source with a question mark at the water table. The question was whether the potential source might be contaminated groundwater. She explained there were other PRP's that Ms. Hollan was working with that may or may not be potential sources.

Ms. Rosati presented a conceptual model that might be used in the RA to evaluate who might be exposed. She discussed potential exposure pathway mechanisms and the method for evaluating human exposure in the RA. She reiterated that they will be addressing breathing of contaminated indoor air, drinking contaminated groundwater or bathing in contaminated groundwater. The risks to children and adults will be addressed, along with residents and workers because different assumptions can be derived from the various groups.

Ms. Rosati showed how EPA characterized risk through risk equation, exposure multiplied by toxicity equals risk. Exposure takes into consideration how much, how often, and how long someone might come into contact with site contaminants. Toxicity was determined by the existing data on what was known about how harmful these chemicals were. Risks are determined by evaluating whether contaminants are carcinogenic or potentially carcinogenic and whether they would cause other adverse health effects such as liver or kidney damage. This, along with the results from the exposure multiplied by toxicity, chemical risk provided EPA with risk information. The work plan will also highlight whether cancer risks, non-cancer risks or both are posed.

Ms. Rosati discussed the last component of the work plan which included the tasks required to complete the FS. EPA will develop a range of clean up alternatives, including no action. The Superfund Law required a no action alternative as a baseline against which other clean up actions are evaluated. The FS will analyze more stringent, complete and expensive clean up actions. The goal is to develop clean up options that help insure the protection of human health and the environment, coupled with a clean up alternative that will maintain protection over time and one that will minimize the amount of untreated waste that will remain at the site.

Ms. Rosati described the FS. The study will provide a preliminary assessment of Applicable or Relevant and Appropriate Requirements (ARARs) and a preliminary screening of clean up technologies. Ms. Rosati reported that ARARs were state and federal statutes or regulations that a Superfund clean up must comply with. She provided an example of complying with the Clean Air Act when someone proposed building an incinerator or complying with the Safe Drinking Water Act if someone was looking into pumping and treating groundwater. The work plan indicated EPA has done a preliminary screening of ARARs as it identified the laws and regulations that apply at this site.

Ms. Rosati explained how the work plan will contain an initial screening of clean up technologies; things that may work using the criteria of effectiveness, implementability and cost. Implementability refers to the availability of services and materials required to build a certain treatment system. The 3 criteria were included in the 9 criteria discussed later. The work plan will contain a table highlighting a range of clean up technologies. The table shall explain why a certain technology may or may not be appropriate for the site and it will identify technologies that will be forwarded for further analysis in the FS. National EPA used the same criteria at every Superfund site to evaluate clean up technology alternatives.

Ms. Rosati identified the clean up technologies that will move forward for detailed analysis in the FS. The technologies included: monitored natural attenuation, enhanced bioremediation, in-situ chemical oxidation, dual-phase extraction and treatment, hydraulic containment, groundwater extraction and treatment using advanced oxidation processes, liquid-phase granular activated carbon or air stripping, and off-gas treatment using either vapor-phase granular activated carbon or thermal oxidation for vapor emissions from air stripping and dual-phase extraction system. The No Action Alternative was not reflected in the presentation but it will be carried forward for detailed analysis.

Ms. Rosati discussed three criteria used in the initial screening, effectiveness, implementability and costs. Implementability looks at the ease of building the technology and costs.

She reported the No Action alternative was not included in the visual presentation. EPA will carry this into the FS to look at in detail. The work plan will include a table which briefly describes each technology, why the technology is recommended for further detailed analysis, and why EPA believes the technology is a good candidate for the site.

Ms. Rosati discussed how the FS will include viable technologies that will be assembled into clean up alternatives. Every Superfund site reviews the clean up alternative and asks all questions of each alternative. Community acceptance is the last criteria. Community acceptance is evaluated after the public hearing on the proposed plan on the preferred clean up is conducted. The ROD describes how the selected clean up plan alternative meets the community acceptance criteria. Information is based on the feedback received.

Question from Mr. Doug Tucker, CAG member

Mr. Tucker referred to previous mention in the presentation regarding minimizing the amount of untreated waste at the site and "ARARs". He referred to the underground utility relocation for light rail. He asked about the risks to utility works in the trench if there was a VOC contamination for inhalation hazards. He also asked where the spoils were going if they were contaminated and it came out of a Superfund site. Mr. Tucker stated he didn't know for a fact, but he was told they were going by Highways 202 and 101 where a lot of stuff gets reprocessed; for example reprocessing asphalt for roads.

Ms. Rosati replied that they were going to be evaluating risks to residents, both children and adults and workers, and that the assumptions will be different for each group. She explained the groundwater was at 90-feet below ground surface (bgs). She further stated the RA will address that scenario. It will look at both the workers who may be performing work in a building above the contaminated groundwater plume and workers involved in various trenching activities. Soil gas will be collected at 5 and 10 feet bgs to assist in evaluating vapor inhalation risk. This is where there may be a higher concentration or risk.

Sue Kramer, Shaw Environmental, mentioned workers will be required to comply with their company's Health and Safety Plan, which might require certain work procedures or require that workers wear protective clothing if warranted by risk.

Ms. Hollan indicated the ROD might contain notification requirements if trenching were to occur in contaminated soil or above highly contaminated groundwater.

Next portion of the discussion centered on the light rail project

Ms. Rosati discussed how EPA had met with the city and several individuals during community meetings earlier in the year. They met with representatives from the public works department, the environmental programs department, economic development, engineering and planning. She explained that this evening’s presentation was presented to them, so they were aware of what EPA was doing.

Mr. Tucker asked if there was an environmental impact statement produced by the light rail or the city that was created before this work so that CAG members or anyone else who may be worried about exposure could be assured they were not at risk.

Cynthia Parker, Environmental Programs Supervisor with the City of Phoenix was asked whether she knew of an Environmental Impact Report (EIR) regarding the light rail system. Ms. Parker responded that she was not sure. She thought the city would have

been required to do an EIR for the light rail system. She told the CAG she would get an answer to their question.

Mr. Tucker asked whether that report could be provided to the CAG members if they wanted to review it. He went on to explain that the reason he was asking was because he had worked in underground utility locations in Arizona. He worked in a Superfund site after it was declared a Superfund site, and the workers were never notified. He indicated some people may have done an Environmental Impact Statement (EIS) and mentioned it as a minor thing located in the back of some document. He emphasized how the people who are working in the trenches are being exposed. Mr. Tucker questioned the area where contaminated groundwater runs and whether they are off-gassing and exposing utility and light rail workers.

A CAG member commented on the study on TCE evaporation and exposure. Ms. Rosati explained RI/FS will look at the study and the risk to workers. Kris Paschall of ADEQ indicated ADEQ will also be studying this.

Mr. Tucker inquired about moved soil or spoils. He informed the group that he had looked into a few of them and that they go down pretty deep (15+ feet). He asked where the soils were going if there was contamination. Ms. Cooper responded that this is something that should be followed up. Ms. Rosati explained the work plan will be out for public comment in the next few months.
Mr. Tucker expressed his concern that this work has been happening before and is currently going on.

A CAG member shared that one of the first CAG meetings they attended included a presentation on TCE vapor and how noxious it was and whether or not it was in people's homes. The speaker indicated several CAG members had asked about it, and they did not believe they had received a comfortable response.
Ms. Rosati stated she believed this was something that will be developed as part of the RA so that actual data (calculations) could be shared about what was found with soil gas in particular locations, particular depths and what EPA thought the risks would be for someone whether as an in-house risk or an indoor air risk.

A CAG member asked whether the gentleman who spoke on toxicity regarding the particular compounds could be brought back as a presenter. EPA agreed to provide a toxicologist at a future CAG meeting when the results of Baseline RA are discussed.

Mr. Tucker indicated he would like someone working with that to keep track of where the soil is going because if it did turn out to be contaminated, where has the stuff gone? Ms. Hollan commented that this was a possible institutional controls issue.

Mr. Suriano spoke about OU1 RA.

Ms. Moore asked when the RA was going to be done. She stated they had been dealing with the federal government for a long time with this. She asked about the collection and completion of TCE RA information.

4. How to provide comments to EPA - Viola Cooper

Ms. Cooper's topics included: defining objectives, collecting background materials, document review, writing comments (what to say). She explained that commenting was a method for the public to provide input about what they think. Advocating for public participation was essential.

Defining objectives was the first step. It was important to make sure that comments from all groups that may be affected by the project be considered.

The second step involved collecting background material on the issue. This could include fact sheets, regulations, and agency material, agency guidance which may require you taking a trip to the library or information repository. She indicated that individuals should address their comments to Janet Rosati.. Ms. Cooper suggested that individuals coordinate with the CAG as a group.

The third step involved document review. Notes should be made regarding issues not addressed, errors or omissions, and accuracy or consistency with other information.

Finally, the last step was writing the comments. Ms. Cooper instructed the CAB to include a cover letter if their comments were lengthy. The following are cover letter requirements:

- Address the letter to the decision maker.
- Specifically reference the document being commented on.
- State whether you oppose or support or whether you want it changed
- If there are alternatives, clearly state your choice.
- Establish your authority to comment, just by being a member of the public; you have the authority to comment.
- If you have made prior comments, reference pertinent comments received and identify attachments, if any.
- If comments are lengthy, summarize major components in the document.
- Explain how the proposed action affects you.
- Suggest specific language and specify what you may or may not support.
- Provide supplemental information as needed.

If there were a large number of questions in the comments EPA would meet with the public to answer the questions. The time to ask questions was now. Ms. Cooper urged CAG members to include their contact information and ask for a direct response to their question. She suggested that they provide easily readable comments. EPA will try to make the document easy to read or summarize in a fact sheet. EPA can provide samples of other comments since they are all public record. Individuals may meet with local representatives to advocate their position. Ms. Cooper concluded her presentation and asked if there were any questions.

Ms. Zermeno asked to see a show of hands of attendees. She asked who was attending the meeting because of a work requirement (EPA, ADEP, PRP reps) or who represented a neighborhood or concerned community members. The show of hands indicated the number of community members was in the minority.

5. OU3 Study Area Potentially Responsible Parties (PRP) Investigation Updates - Nadia Hollan, EPA Remedial Project Manager

Ms. Hollan provided an update on facilities currently under investigation in the OU3 study area. Facilities were being investigated for similar contaminants that Ms. Rosati referred to in the groundwater. This part was related to a source that could be at the surface, and contaminants would have been released at the facility and migrated down to the ground. The investigations focused on what occurred at the facilities, the type of contamination that might still be in the ground and whether the contamination was going to the groundwater. Ms. Hollan indicated this was a brief update on status. She also stated there were maps of each facility that could be used as reference for review depending on individual interests.

Ms. Hollan stated that EPA had signed agreements with four companies to conduct the work at their facilities. A research report and the work plan are the main documents produced. She explained the research report takes a comprehensive look at what happened at the facility over the history of operation. The report will provide information on potential source areas. The work plan addresses the sampling process and rationale.

Ms. Hollan discussed the status on each facility:

Salt River Project on 16th St. and Lincoln - The research report was completed and the draft work plan was being revised, due at the end of May 2005. Ms. Hollan asked if anyone was interested in a facility, they should contact her or Kris. Ms. Hollan will send documents to Kris for placement in the library or information repositories.

Arizona Public Service - The research report and work plan were submitted this week. EPA hopes to review quickly so facility can begin sampling.

500 S. 15th St. - The research report was completed and is currently under revision based on EPA comments. They will move on to the work plan.

The last facility, former Western (and Phoenix) Automatic Machining Company (WAMCO) is now Baker Metal Products. The current owner, Baker Metal Products, did not use VOCs; EPA was currently investigating what happened there in the past. Reports were submitted and EPA is reviewing them.

Ms. Hollan was asked whether she thought that Baker Metal did not release the VOCs. She indicated they were working with BDR Liquidating who represents the estate of the former owner of the WAMCO Company. They are responsible for the work so they must work with the current owner concerning issues such as access. The current facility owner was working with the responsible company doing the work.

Ms. Hollan reported that Phoenix Newspapers had not yet signed an agreement; therefore they had not started the research report process. Walker Power Systems (facility located on Richard Street and Jackson) was in the same category. Work was definitely required

at this facility. They submitted a research report and EPA has provided comments. EPA is still waiting for response comments. EPA was waiting for a meeting or an agreement to be performing the work or will explore other options. Ms. Hollan reported that another facility was identified as a possible responsible party (PRP): Paul McCoy's Laundry and Dry Cleaning at 16th St. and Washington. A UST clean up was done several years ago, soil removals were performed, and some vapor monitoring wells were installed. EPA was composing a letter to determine the status of the facility, i.e. determine work to be done, completion date and whether EPA can review. A determination needed to be made regarding the location of the soil vapor monitoring wells and whether EPA can monitor at the site. Ms. Hollan reported on two additional facilities that have done initial soil gas sampling, both received low levels of VOCs in the soil gas samples and EPA has evaluated both reports. EPA provided comments to Wabash Trailers, currently run by Southwest Mobile, who does not handle VOCs. EPA was currently only working with the operator responsible for the historic operation and not the current operator of the facility. EPA believed Wabash required additional sampling of areas that were deeper in the ground where residual contamination exists. A review is ongoing. These are the facilities that have been notified as PRPs. Ms. Hollan stated that there were additional facilities that need to be identified and named. The internal process had not been completed and as they are named, EPA will inform individuals.

Ms. Hollan was asked whether she knew how many facilities. Ms. Hollan replied: "About three or four". There were some facilities they were still trying to get information on, so it depended on the information obtained. There could be as much as 9 in the OU2 area.

Ms. Hollan was asked whether EPA was basically reviewing what happened. Ms. Hollan answered: "yes". A fact sheet was created that described the process. She referred to the mass mailing done in the year 2000. Letters were sent to hundreds of facilities, inquiring into whether they used VOCs and similar questions related to releases and chemical use. The initial round covered those who used VOCs. EPA is currently reviewing information on others or new companies identified based on the research. Ms. Hollan reported the process was ongoing, and as more information was obtained, more parties will be brought in.

Ms. Hollan was asked whether documents were being reviewed. Ms. Hollan confirmed they were reviewing several pages of documents sent along with information from completed investigations and previously submitted reports. Ms. Hollan stated that an investigation was done in 1984, and data was obtained in 1984 and 1993. Levels in soils gas were 140 mg/liter TCE in 1993. In 1984 the levels equaled 65(?) mg/kg in the soil. No conversions were available. It is believed that they exceeded groundwater levels in the soil. This would have impacted groundwater.

Ms. Hollan was asked whether sampling had been done since the last 12 years. Ms. Hollan responded that sampling will need to be done. A comment was made regarding the length of time since the last sampling and that there seemed to be a lot of micrograms per liter. Ms. Hollan re-emphasized the need to do additional sampling. She indicated that as time passed, vapors dissipated. If there was a significant source, it was still expected something will be out there.

Ms. Hollan was asked whether anything was done in relation to soil gas. Discussions regarding whether the company was investigated as a responsible party or if they impacted OU2 were generated during this portion of the meeting. Reference was made to tracking down additional PRPs.

Ms. Hollan was asked by Jerry Worsham, Gammage & Burnham *(counsel for ArvinMeritor)* whether EPA could estimate the time it will take to review the submitted document regarding the 500 S. 15th Street facility. Ms. Hollan indicated it will be a few more weeks.

Ms. Zermeno commented that the OU3 investigation asked what was considered low levels of PCE. She asked Ms. Hollan if Baker metal facility was below 1 microgram per liter. There was reference to the levels of vapors and samples of soil gas.

Ms. Moore questioned what had happened since the test 12 years ago. She stated that this was a lot of time and a lot of contamination and that as time went by it will dissipate and it will need to be rechecked. She provided the example that Union Pacific was now 6 or 7 mg per liter. Ms. Hollan stated that EPA had a lot of documents and workplans to review, and the public was welcome to review them.

6. Operable Unit 2 (OU2) Treatment System Upgrade - Nadia Hollan

Ms. Hollan reported the facility being discussed was the water treatment plant at 20th St. and Washington. Ms. Hollan presented findings on facility operations through the end of March 2005. She presented figures on the amount of material VOCs that were removed and the amount of water pumped. A site map was presented highlighting the plume at the Site, the extraction wells and groundwater flows into the wells. Slides presented identified 400 pounds of VOCs removed within 140 million gallons of water extracted by EPA. There had been a general decline in the water available for extraction.

Ms. Moore asked who was responsible for starting or stopping the pumps. The response was that Freescale and Honeywell (The Companies) hired a contractor, CRA, who was responsible for stopping and starting pumps. She also asked whether the groundwater pumping decline was related to the drought. The water had risen due to the rain but it will not stay up. Ms. Hollan used the slide to show the cumulative added from the previous month. She indicated that each plot reflected the actual amount pumped for that month.

Mr. Tucker asked how the pounds of VOCs removed were listed. Ms. Hollan indicated the volume and concentration were calculated, and the total mass could be calculated as well. She referenced carbon absorption canisters. Carbon is not weighed, instead they look at the mass of the groundwater. She stated that EPA received many reports on the treatment system. They included monthly operational reports and quarterly groundwater monitoring reports. An annual report summarized data collected through the year. The 2004 Effectiveness report was recently submitted and is currently under EPA review.

Ms. Hollan indicated there were plans that call for The Companies to install some additional monitoring wells. EPA discovered the contamination in the inner deeper zone was higher than contamination in the shallow zone. They wanted to insure the deeper zone was not contaminated if one moved further south and north. The Companies installed a total of five wells; they were collecting preliminary data (March, April and May). Ms. Hollan also described the location of the monitoring wells. She referenced MW6 that had been there for some time, with results that have always been 5ppb, which is the drinking standard. She referenced deeper wells installed: 11M and 11D, 11M has 29ug/L, 11D has 12 ug/L. These were based on March data which told EPA the contamination was higher in that location. A question was posed referencing MW6. Ms. Hollan responded that MW6 was usually around the drinking water standard. The deeper wells were 11M and 11D.

CAG members expressed confusion regarding the map in their handouts and the map reflected on slide presentation. There had been an addition of one more proposed monitoring well to be drilled in the summer. It was reported that initial drilling had suggested higher contamination at a deeper level.

A question was asked about the fault line or bedrock. Ms. Hollan stated that the rise in bedrock shows some influence. Ms. Hollan stated that EPA was still putting data together and that bedrock was not encountered when drilling any of the monitoring wells. Monitoring wells were drilled to 300 feet. Clarification was made with reference to the actual construction of monitoring wells. Wells would be drilled to a certain depth but the screen intervals were all above bedrock and at different levels in the ground.

Ms. Hollan referenced the cross-section of below ground surface at site. The plume was coming through the middle. There was not much contamination when water was tested at the water table. She stated that as you go deeper, higher contamination was found; once you moved out of the plume, it was clean. She indicated it was like a sandwich with lighter concentrations on the outside and higher ones in the middle.

A question was asked regarding the technology of pump and treat. Pumping and treating deals with contamination or the VOC bearing waste, as opposed to the clean part. Ms. Hollan responded that all was pulled in. Ms. Hollan referred to the reduction of pumping on a north well because it was drawing in a lot of clean water and not dirty water. She stated that the Companies continued to balance the amount of contamination per well in order to optimize clean up. They are trying to match pumping levels of water input.

A CAG member asked whether one can surmise that as water levels increase, the OU2 VOCs are treated and then pumped back in. Ms. Hollan replied that VOCs are not put back in; rather the treated water goes to the canal as treated water. A question was raised concerning amounts of VOCs. Ms. Hollan responded that EPA was trying to match VOCs to pumping levels. She stated there could be a problem if there was less water to pump; it made it harder to pull up VOCs. She stated the harder you pumped the more influence you were going to have on the water. Another question was raised concerning the estimation of groundwater flow speed. Mr. Haag responded that the shallow zone had the fastest speed because it had the greatest conductivity and the greatest pore space at

about 200 ft per day. He indicated the middle zone was slower - maybe 100 to 150 feet per day. And the deeper zone may go to 50 ft per day.

Ms. Rosati commented that water speed also depended on soil type. She provided an example of the similarity between a sponge and groundwater. She stated that if there were bigger holes in the sponge, the groundwater moved faster, and if it was like clay (tight soil), the groundwater moved more slowly. She indicated the groundwater will move faster according to the soil and the contamination will move with it. Ms. Hollan referenced a poster depicting a cross-section of below ground surface of the site and delineated the contamination plume.

Ms. Brietenbach said she understood groundwater was not affected yet but that water had responded faster to rains than originally thought. Mr. Haag commented that no effects from snow melts were evident, and reservoirs were keeping water.

Ms. Hollan stated that contaminants were seen in the "B" zone. EPA was trying to get to the right zones. They were currently reviewing data submitted by companies in March and April. Companies had indicated they believed there was improved capture since they began looking at it earlier.

A CAG member asked about groundwater regeneration after pumping. Ms. Hollan responded that EPA believed the groundwater would not be dramatically affected by the heavy rains this year. She indicated the groundwater had come up a couple of feet and the regeneration will probably not last. Another CAG member asked about the spring thaws that also affect the groundwater level. Mr. Haag responded that the reservoir located closer to the snow packs will take the melted water first and possibly hold it. He suggested that for the most part the flow was stopped.

Ms. Hollan ended her presentation on the OU2 Treatment System update.

7. Call to the Public

The meeting was opened to general questions from the public.

Ms. Breitenbach referred to the first presentation on RI by Ms. Rosati. She referenced the monitored natural attenuation and asked whether anything should be done or whether it just needed to be evaluated. Ms. Rosati responded that guidance required that under the monitored natural attenuation there should be source control and a complete set of groundwater monitoring, groundwater wells to track progress of degradation of the contaminants. The source should be cut off and, then monitoring should be done down gradient to track the degradation of contaminants. She stated it must clear standards in a time reasonably compared to active remediation. She further stated that natural attenuation had to achieve clean up goals within a time that was reasonable compared to active remediation. Ms. Breitenbach indicated she understood the term bioremediation but she wanted clarification on what enhanced bioremediation was. Ms. Hollan responded that it meant giving them food or injecting additional nutrients to accelerate the bioremediation. She stated this could be done in situ or not.

Ms. Breitenbach asked for clarification and meaning of "chemical oxidation". Ms. Kraemer responded that chemical oxidation was a process that oxidizes volatiles by using oxidation or adding chemicals such as potassium to increase oxidation. Oxidized contaminates provide oxygen. Ms. Breitenbach asked about products created by chemical oxidation. Ms. Kraemer indicated that it depended on the added chemicals. She provided the example of potassium permanganate producing purple colored water in some situations. Ms. Hollan replied that this information would be in the feasibility study.

Ms. Breitenbach asked about "hydraulic containment." Ms. Hollan responded that this was what is being done at OU2. They are containing the plume by keeping it from migrating vertically or horizontally and from expanding and moving. After the groundwater is pulled out it's treated with carbon. Different combinations can be done, i.e. containment and some actual clean up within the plume. Ms. Breitenbach asked about off-gas treatment. Ms. Rosati responded that after chemicals are stripped out of the water they are in vapor form. In order to meet air quality standards they would have to be treated to prevent the gases from going into the atmosphere. This process could be done by treating vapors so they would be collecting the vapors on the carbon filters. Filters would be eventually disposed of as hazardous waste. This was what's being done in OU1.

Ms. Breitenbach indicated she was looking at the proposed Honeywell remediation fuel clean up and thought there were three carbon beds before they discharged the emissions. Now she saw that the last one was potassium permanganate. The Honeywell representative responded that the third carbon bed was saturated with potassium permanganate to deal with any vinyl chloride if vinyl chloride was generated. Ms. Hollan clarified for the public that Martha was referring to the fuel clean up going on at the Honeywell facility which was different than OU3.

A CAG member asked about potential fears regarding generation of vinyl chloride. Ms. Meyer responded that this was discussed at the last meeting. They didn't believe there was anything to fear, but as a precautionary measure, an official policy was set.

There were no additional questions.

Ms. Zermeno asked for a show of hands for any geologists or engineers in the audience. She asked if there were biologists, public relations or community involvement folks in the audience. Ms. Cooper then announced that site project managers had prepared a site document list showing documents available for review and comment. The PRP fact sheet was available on the sign-in table.

Ms. Moore asked when the Honeywell RI would be available for public comment. Ms. Paschall responded that it would be available in about two weeks. She stated that once the report was out they would notify everyone and call a meeting.

Ms. Rosati and Ms. Hollan provided a time frame for the RI/FS Work Plan and stated that it should be available in a month and a half in the repositories. EPA will send a flyer out when the work plan is available for public comment. There will be a 30-day public

comment period which could be extended upon request. Currently they were in the final comment stage with ADEQ. A flyer would be sent out so that people knew when it was available. CAG member asked who would receive the flyer. Ms. Rosati responded that everyone on the mailing list would get the flyer.

Ms. Breitenbach asked about the Honeywell fact sheet. She wondered where the wastewater was coming from and how it was being treated. Honeywell responded that the wastewater came from two sources. When it was extracted from the subsurface there was some vapor (air) that travels comes up through the subsurface. In order to reduce dioxin formation they were going to quickly quench the vapor coming off the thermal oxidizer which required it to go through a scrubber, which puts vapor in contact with water. If this was repeated, then the vapor steam was humidified and more water was added. He indicated that this was in the neutralizing, and it created salts because there was some sulfuric and hydrochloric acid formation. Occasionally, the increased salt formation will have to be removed so that the water put through will be effective in neutralizing the acid that is coming through the vapor. This wastewater goes to the public owned treatment works.

Ms. Breitenbach asked whether carbon was hitting the vapor. A Honeywell representative responded that they were humidifying it to get out as much of the water so that it was really only gas that was going through the carbon. Ms. Breitenbach said she thought vinyl chloride was available in liquid form and asked why it would still be volatile. A Honeywell representative responded that part of what they have to do to the wastewater discharge to the POTW is to characterize the wastewater stream. They will have to sample for any contaminants that will potentially be in it, they will have limits on the discharge, and their permit will set certain limits. If limits are exceeded at any time they will have to treat it further before they can discharge it for treatment in the sanitary sewer. There could be low levels that can be accepted by the POTW for treatment, but they may exceed levels that the city feels that their system does not have the capacity to treat or does not have the capability to treat. A CAG member stated that they must not have much of a capacity to treat anything, especially since they had become a third world country (referring the city of Phoenix requirement for residents to boil their water this past winter). Honeywell asked whether their question had been answered. The CAG member responded “yes”, but he also asked if anything existed in the wastewater, would it be caught on monitoring and treated before release? Honeywell responded that it would if it exceeded the limits in the permit.

Mr. Haag asked about what they were going to permit or whether they specified pretreatment, especially concerning the facility levels. He stated that it didn’t make sense. Honeywell responded that right now there was no indication that the types of levels they were talking about would present any kind of problem to the treatment works. He stated there was no indication at the time they will have any problems getting a permit. Mr. Haag asked whether a permit was pending. Honeywell responded that some of the work will be continuing after they start discharging because currently there were no actual results. It was all based on expected modeling results and things like that.

A CAG member asked whether they had actually applied for a permit. Honeywell asked for clarification and whether they were referring to the wastewater permit. The response

was negative because they were finalizing the design for the system. The capacity was still being evaluated. He stated that it was on the schedule. They would be submitting the application for the air permit probably in the first part of May. They will be filing an amendment to the Title V permit. CAG member asked how they could proceed without a Title V permit. Honeywell responded that it will be a significant modification to the existing permit with the expectation that when the Title V permit comes out from EPA then that becomes the amendment to the Title V permit through the administration.

The CAG member questioned whether the request for Title V permit was in the process at EPA Region 9. Honeywell responded that this was their understanding; it was in EPA and that it would be released in the next two weeks. He explained that in order to get the application submitted, they would submit it as an amendment to the existing permit. When the Title V permit comes out it will become and amendment to the Title V permit. Ms. Hollan stated she would find out who in EPA was doing the permit *(Emmanuelle Rapicavoli is the EPA Region 9 contact for the Title V permit).*

Ms. Breitenbach asked whether it would need to go through public review since it was a significant publication. The Honeywell representative stated that Mr. Breitenbach was correct. Ms. Breitenbach asked about the UST's they are referencing. She also asked about UST's currently being used and whether they were re-discovered on site. The Honeywell representative stated they continue to have underground storage tanks at the facility. Ms. Breitenbach asked if they were currently being used. The response was that USTs are currently being used to hold between one million and a half to two million gallons a year of jet fuel for testing engines. Ms. Breitenbach asked if they were all varied. Honeywell responded that the majority of them were varied as far as volume was concerned. Ms. Breitenbach asked when they were put in. Honeywell responded that it happened in different periods but that they had all been upgraded as of the 86' UST regulations. He stated that it was reported during the last meeting that a leak was found in one of the piping systems, and the investigation was completed on that well today. They excavated soil, repaired the lines and finalized the investigation report. Ms. Breitenbach asked how many UST's were currently in use and what types. The Honeywell representative responded there were 22 USTs and that the average size was about 8,000 gallons. He also indicated there were some USTs that were 20,000 gallons. The Honeywell representative discussed different fuels being held in the USTs. Refined fuel uses jet A. JP-4 and JP-8, have a variety of different refined fuel to use dependent on the type of engine. Ms. Breitenbach asked about planting future storage tanks and whether it could be done tomorrow. Honeywell responded that all the jet fuels in the underground storage tanks are permanent. They have to be registered. If they wanted to install an additional groundwater permit for an underground storage tank, they would have to register it and get it permitted by the state and federal UST system.

8. Future Meeting Plans and Agenda

A request was made for an update and information regarding the status of the OU1 treatment system. Tom Suriano was asked to provide an update. He stated that the effectiveness report had just been released. A request was made to add the Salt River project and the City of Phoenix to the Environmental Resources list that was distributed at this meeting.

A CAG member stated that Maricopa County just formed a new Air Board Quality Department and had a new Director, Mr. Card. The CAG wanted to meet the new director. The CAG requested a presentation on the Indoor Air Risk Assessment at OU1. Kris Paschall or Tom Suriano recommended this topic be discussed after the data was collected. This will be after the next CAG meeting. Since there was no current data, it was decided the meeting be postponed.

A CAG member asked why the plume in OU1 was reconnected. Mr. Haag responded the data from the new well NW 9D caused the plume to be drawn further south. He stated the previous maps were drawn using only data from the alluvium. They used bedrock data to draw the map, and it had changed due to new information. NW09 new data brought it down from the south. He indicated that most of it was deeper in the water. He stated that deeper wells will be put in this summer and that they could possibly see some results by the end of the year.

Ms. Zermeno asked about the drought water management plan for the city and whether there would be enough water for future growth. Ms. Hollan stated that she recognized there were a variety of topics the CAG would like to have on the agenda that are not related to the Superfund site. She indicated that their priority needed to be on topics related to the Superfund site, and, if time and funding allow, they could cover other topics. Ms. Hollan emphasized that EPA funding and their priority will be on Superfund site topics.

Ms. Zermeno indicated she understood the reason for the groundwater clean-up was because the City presently relied on runoff and since the population was growing, the groundwater will be needed for drinking water in the future. She asked about the city's plans to deal with the increased water demand, and she asked about the drought water management plan. A CAG member responded that it was their belief that they currently rely on runoff and that the water is being cleaned up because they will need to drink it at some point. Ms. Hollan responded that the drought management plan could be discussed in connection with the OU3 RI. Mr. Haag responded that he will send Ms. Zermeno a copy of the April 2005 Water Quality Plan.

The next meeting date was proposed for June 3rd or 4th week at 6 p.m. or June 22nd or June 29th, 6 p.m. at ADEQ. Meeting adjourned at 8:25 p.m.